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L12: Entry 3 of 4 File: USPT Aug 25, 1992

US-PAT-NO: 5142469
DOCUMENT-IDENTIFIER: US 5142469 A

TITLE: Method for converting a programmable logic controller hardware configuration and corresponding control program for use on a first programmable logic controller to use on a second programmable logic controller

DATE-ISSUED: August 25, 1992

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Weisenborn; Gerald M.	Ruckersville	VA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
GE Fanuc Automation North America, Inc.	Charlottesville	VA			02

APPL-NO: 07/ 501612 [PALM]
DATE FILED: March 29, 1990

INT-CL: [05] G06F 9/06, G06F 15/60

US-CL-ISSUED: 364/146; 364/147, 364/DIG.2, 364/927.81, 364/926.9, 364/949, 395/500, 395/919, 395/921, 395/922
US-CL-CURRENT: 700/17; 703/15, 703/24, 706/919, 716/16

FIELD-OF-SEARCH: 364/140-147, 364/DIG.2, 364/DIG.1, 364/2MSFile, 364/9MSFile, 395/919, 395/921, 395/922, 395/920, 395/500

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected | Search ALL

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	4250563	February 1981	Struger	364/900
☐	4504927	March 1985	Callan	364/900
☐	4677548	June 1987	Bradley	364/200
☐	4849928	July 1989	Hauck	364/900
☐	5038317	August 1991	Callan et al.	364/137 X

ART-UNIT: 236

PRIMARY-EXAMINER: Ruggiero; Joseph

ATTY-AGENT-FIRM: Beusse; James H.

ABSTRACT:

A method is provided for converting a hardware configuration and corresponding control logic program for use on a first programmable logic controller (PLC) to an equivalent hardware configuration and control logic program for use on a second PLC. A graphic representation of hardware modules which are usable with the first PLC are displayed for the user's consideration. The user selects those modules which are actually employed in a particular hardware configuration for the first PLC and a first hardware configuration file is created therefrom. A determination is then made of those second PLC hardware modules which are equivalent to the first PLC hardware modules contained in the first hardware configuration file. This determination is made by referencing a first data base which includes information as to which hardware modules for use on the second PLC are equivalent to corresponding hardware modules for use on the first PLC. A mapping of I/O points from the first PLC to I/O points of the second PLC is then generated. These determining and generating a mapping steps define the second hardware configuration of the second PLC. The method further includes generating a second control program for use with the second PLC from the statements of the first PLC and the mapping of I/O points. This is accomplished by checking each statement of the first control program with a second data base to determine an equivalent statement for the second control program.

9 Claims, 5 Drawing figures

L12: Entry 3 of 4 File: USPT Aug 25, 1992

DOCUMENT-IDENTIFIER: US 5142469 A
TITLE: Method for converting a programmable logic controller hardware configuration and corresponding control program for use on a first programmable logic controller to use on a second programmable logic controller

Application Filing Date (1):
19900329

Detailed Description Text (10):
FIG. 2 shows a flow diagram of the method for converting the original PLC 10 control logic program or application to a control logic program or application for the new target PLC 20. A knowledge based artificial intelligence translator computer program 400, which employs the methodology of artificial intelligence (AI), employs the following inputs: an original PLC hardware configuration file 410 which is input to the translator program through operator interaction and which describes the original PLC 10 hardware and an original PLC 10 control program file 420. Translator program 400 is operator interactive and generates the following as outputs: a cross reference list 430 of original PLC 10 I/O points and new target PLC 20 I/O points, a new PLC 20 hardware configuration 440 and an annotated new PLC 20 control program 450.

As to Claim 7: **Mann** et al. teach a method, wherein the step of monitoring activities associated with individual customers includes the step of receiving data from security agencies.

As to Claim **8**: **Mann** et al. teach a method, further comprising the step of applying artificial intelligence engines to cross-reference activities of multiple customers.

As to Claim **9**: **Mann** et al. teach a method further comprising the steps of providing the individual customer with a random multi-digit code for the customer, and
at time of check-in, an agent entering the multi-digit code into a computer which confirms the prior verification of identity.

As to Claim **10**: **Mann** et al. teach a method, further comprising the step of generating a probability of risk associated with the individual customer.

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L3: Entry 1 of 1 File: USPT Sep 12, 2000

DOCUMENT-IDENTIFIER: US 6119096 A
TITLE: System and method for aircraft passenger check-in and boarding using iris recognition

US Patent No. (1):
6119096

Detailed Description Text (26):
FIG. 2 is a flowchart showing a record creation sequence according to the present invention, which may be implemented using the equipment shown in FIGS. 1a and 1b, and in particular, the registration station 108. Registration station 108 is preferably an automated ticketing station, but may also be attended by an operator. Referring now to FIG. 2, in the first step (block 202), registration station 108 receives information from the user or from an attendant about the type of purchase desired by the user (for example, a certain number of a selected class of tickets to a particular event, or a predetermined credit toward transit fares to be incurred). Payment and/or payment information is obtained, as by the swipe of a credit or debit card, insertion of cash, or provision of bank account information for debiting purposes. The sale of the ticket(s), transit fare credit, or the like is then recorded in database 106 (shown in FIG. 1a).

Detailed Description Text (57):
A preferred process for implementing the system in an air travel application is shown in FIG. 6. To make a reservation, the user first identifies himself or herself as a registered customer using an account number or other identifying information, such as name and address, or preferably a biometric scan, as shown in Block 602. Next, the reservation information is received (Block 604) and the reservation information is recorded in conjunction with identification of the relevant user account (Block 606). Upon arrival at the airport, the user will be scanned at a biometric scanning station (Block 608). In block 610, the identity of the passenger is matched to the user account under which the reservations were made. If a match is found, execution continues at block 612 and the passenger is "checked in," i.e. the seat assignment is confirmed, luggage is tagged and accepted, and if desired, a boarding pass is issued. If desired, of course, the system may be used in a manner which substantially eliminates the issuance of tickets and boarding passes, based on scanning and verification of user identity at each stage of the luggage check and retrieval, area access control, and boarding process, where a boarding pass is traditionally used as identification.

CLAIMS:

42. A method for expedited passenger baggage check and boarding onto an aircraft using iris recognition, comprising the steps of:

enrolling passengers to create a plurality of passenger account records, each including an account identifier and iris data sufficient to positively identify the passenger without requiring further identification;

accepting a flight reservation from a passenger having a passenger account record, and storing a flight reservation record linked to said account identifier;

providing a first iris identification station at a baggage check location and imaging an iris of a person seeking to check baggage to obtain iris feature information sufficient to positively identify said person without the presence of other forms of identification or tokens;

comparing said iris feature information obtained at said first iris identification station to at least those passenger account records having an associated reservation for a flight to match said person seeking entry to said iris data in one of said passenger account records, and when a matched passenger account record and flight reservation record are identified, tagging and receiving the person's baggage;

providing a second iris identification station at a gate location and imagine the iris of a person seeking to board the aircraft to obtain iris feature information sufficient to positively identify said person without the presence of other forms of identification or tokens;

comparing said iris feature information obtained at said second iris identification station to at least those passenger account records having an associated reservation for a flight to match said person seeking entry to said iris data in one of said passenger account records, and when a matched passenger account record and flight reservation record are identified, permitting the person to board the aircraft without requiring further identification or manipulation of tokens.

55. A method for automated aircraft passenger baggage checking, boarding, and baggage reconciliation using iris recognition, comprising the steps of:

enrolling passengers to create a plurality of passenger account records, each passenger account record including an account identifier and biometric iris data sufficient to positively identify the passenger without requiring further identification;

accepting a flight reservation from a passenger having a passenger account record, and storing a flight reservation record linked to said account identifier, said flight reservation record including a seat assignment;

providing a first iris recognition station at a baggage check location and imaging an iris of a person seeking to check baggage to obtain iris feature information sufficient to positively identify said person without the presence of other forms of identification;

comparing said iris feature information to at least those passenger account records having an associated reservation for a flight to match said person seeking entry to a passenger account record, and when a matched passenger account record and flight reservation record are identified, tagging and receiving the baggage;

providing a second iris identification station at a gate location and imagine an iris of a person seeking to board the aircraft to obtain iris feature information sufficient to positively identify said person without the presence of other forms of identification;

permitting a passenger with a matched passenger account record and flight reservation record at the second iris identification station to board the aircraft without requiring further identification; and

automatically reconciling records of baggage checked at said first iris identification station with records of passenger boarding at said second iris identification, station to identify baggage which was checked but whose owner did not board the aircraft, so that such baggage does not go with the aircraft.

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L15: Entry 1 of 1 File: USPT Jun 12, 2001

US-PAT-NO: 6246975
DOCUMENT-IDENTIFIER: US 6246975 B1
**** See image for Certificate of Correction ****

TITLE: Computer architecture and process of patient generation, evolution, and simulation for computer based testing system

DATE-ISSUED: June 12, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Rivonelli; Richard J.	Lexington	KY		
Sumner, II; Walton	Webster Groves	MO		
Marek; Victor W.	Lexington	KY		
Truszczynski; Miroslaw	Lexington	KY		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
American Board of Family Practice, Inc.	Lexington	KY			02

APPL-NO: 08/ 961185 [PALM]
DATE FILED: October 30, 1997

PARENT-CASE:
RELATED APPLICATIONS This application claims priority from U.S. provisional patent application entitled COMPUTER ARCHITECTURE AND PROCESS FOR PATIENT GENERATION, EVOLUTION, AND SIMULATION, Ser. No. 60/029,856, to Rovinelli, et al., filed Oct. 30, 1996, the details of which are hereby incorporated by reference.

INT-CL: [07] G06 G 7/48

US-CL-ISSUED: 703/11; 434/262, 128/920
US-CL-CURRENT: 703/11; 128/920, 434/262

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PRIOR-ART-DISCLOSED:

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ART-UNIT: 273

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ABSTRACT:

A computer implemented simulation and evaluation method simulates interventions to a patient by a user, and evaluates the interventions responsive to predetermined criteria and the interventions. The method includes defining a test area to evaluate the user to at least one of predetermined criteria and a user profile, selecting genetic information of the patient responsive to the test area, and generating a patient history responsive to the test area and the genetic information. The method also includes receiving at least one intervention input by the user, and evaluating the user responsive to the intervention and predetermined criteria.

51 Claims, 18 Drawing figures

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DOCUMENT-IDENTIFIER: US 6246975 B1
**** See image for Certificate of Correction ****
TITLE: Computer architecture and process of patient generation, evolution, and simulation for computer based testing system

Application Filing Date (1):
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Brief Summary Text (14):
We have further determined that experts generally not only relate to one dimension of knowledge when defining a rule, but also rely upon expansive knowledge of how systems work (i.e., physiology and pathophysiology in the medical domain) in performing real-world problem-solving. See, for example, Davis R., Expert systems: where are we and where do we go from here, AI Magazine, 1983, Vol. 3, pages 3-22, incorporated herein by reference. This realization has led to re-thinking regarding structure of knowledge-based systems to reflect the tasks such a system should accomplish, the methods the system should use to accomplish the tasks, and the knowledge required to support these methods. See, for example, David J M, Krivine J P, Simmons R., Second generation expert systems: a step forward in knowledge engineering, In: David J M, Krivine J P, Simmons R., Second Generation Expert Systems, Springer Verlag, New York, N.Y. 1993, pages 3-23, incorporated herein by reference.

Brief Summary Text (19):
Each health state in turn has associated findings, and specific findings. For example, the Normal Airways state, the Finding "Shortness of Breath" is instantiated with the Specific Finding "No shortness of breath." Similarly, other Findings such as Respiratory Function and Severe Asthma Attack Frequency are instantiated with corresponding normal Specific Findings (Normal Respiratory Functions, and No Severe Attacks.) This representation transports to each new health state in a manner which we have determined to be analogous to diagnosis. See, for example, Genesereth M., Diagnosis using hierarchical design models, Proc. National Conference on AI, 1982, incorporated herein by reference.

Detailed Description Text (17):
In general, a model describes the kinds of information that could be collected regarding a topic. For instance, a model of a mailing address should include at least a name, street address, apartment number, city, state, and ZIP code. A database built upon this model could list these items for each entry. Not every item in the model should be described for every entry in the database; many addresses have no apartment number. Incomplete database entries still provide useful information; even if a street address is missing, the city to search can be found.

Detailed Description Text (75):
The model described herein is intended to be a highly structured and realistic representation of family medicine that will guide the design of the family practice knowledge base and support the generation and evaluation of recertification examinations. In this model, the following are strong assumptions: (1) Health States are discrete and distinguishable on the basis of associated Findings, which are also discrete and distinguishable on the basis of the Patterns of their Features. (2) After choosing a percentile curve in a Pattern to represent some value, the percentile does not change substantially. (3) Changes in Patterns (e.g., the probability of one Health State evolving to another) can be described for important combinations of risk factors, interventions, and time of occurrence. (4) Transitions

from one Pattern to another can be estimated by simple means. (5) Modifying relations do not have important interactions with one another. (6) Highly developed anatomic and physiologic models are not necessary, because associations between Findings provide the same information.

Detailed Description Text (82):
We have also determined that the structure of an interface to medical reference systems might be enhanced using the model. Current reference systems use the structure of medical publications and lists of abstracted subject headings to facilitate searches through very large databases. These searches can yield large numbers of extraneous citations, especially for novice users.

Detailed Description Text (83):
The model suggests an alternative indexing strategy, as well as a graphical search interface. For instance, one could view a query interface similar to FIG. 3. To request a query about the effect of insulin treatment on the development of retinopathy in diabetic patients, one selects diabetes from an unrestricted list of Health States. The Lead to allows the user to select diabetic retinopathy from a list of diseases restricted to diabetic sequelae. The Modifier specifies which Course of Action or Agent of Change to consider. The computer delivers a list of references mentioning insulin in a diabetes Leads to diabetic retinopathy relation. Searching for a particular relation between two entities improves the efficiency of searches usually performed by naming the entities.

Detailed Description Text (137):
The leads to relation connects one health condition (the precursor) to another (the target), and describes possible time intervals required for evolution from the precursor to the target. A Pattern describes a probability density function (pdf) of these time intervals, conditioned on comorbidities, treatments, and other risk factors. This duration pdf provides a time constraint mechanism. For instance, a duration pdf for the progression of mild to moderate knee osteoarthritis, given obesity, might indicate a probability density of zero in the first five years following the onset of mild osteoarthritis, a uniform probability density from year five to year twenty, and then a probability of zero. This implies that all simulated obese patients develop moderate osteoarthritis between five and twenty years after the onset of mild osteoarthritis, and forbids simulated onsets at other times.

Other Reference Publication (1):
International Search Report PCT/US00/08942.

Other Reference Publication (148):
"Understanding and Using the Medical Subject Headings (MeSH) Vocabulary to Perform Literature Searches" by Henry J. Lowe et al., JAMA, Apr. 13, 1994, vol. 271, no. 14.

CLAIMS:

28. A computer implemented simulation and evaluation method for simulating interventions including active and passive intervention to a complex system, such as a patient having a set of normal and abnormal conditions such as a health state, by a user, and for evaluating the interventions responsive to predetermined criteria and the interventions, comprising the steps of:

(a) accessing the computer implemented simulation and evaluation method by the user;

(b) defining a test area to evaluate the user by the computer implemented simulation and evaluation method responsive to at least one of predetermined criteria and a user profile;

(c) selecting genetic information of the patient responsive to the test area;

(d) generating a patient history responsive to the test area and the genetic information;

(e) receiving at least one intervention input by the user; and

(f) evaluating, the user responsive to the at least one intervention input by the user and the predetermined criteria;

wherein said generating step (d) further comprises the step of generating the patient history responsive to the test area, the genetic information, and an entity relationship model; and

wherein the entity relationship model utilizes tree structures to describe a probability density function conditioned on comorbidities, treatments, risk factors, and the interventions.